Gregor Schiwietz

List of Publications by Year
in descending order

134	3,204	136885	189801
papers	citations	32 h-index	50 g-index

137	137	137	1342
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Improved charge-state formulas. Nuclear Instruments & Methods in Physics Research B, 2001, 175-177, 125-131.	0.6	241
2	Coupled-channel calculation of stopping powers for intermediate-energy light ions penetrating atomic H and He targets. Physical Review A, 1990, 42, 296-306.	1.0	115
3	Impact-parameter dependence of the electronic energy loss of fast ions. Physical Review A, 1998, 58, 3796-3801.	1.0	114
4	A unitary convolution approximation for the impact-parameter dependent electronic energy loss. Nuclear Instruments & Methods in Physics Research B, 1999, 153, 1-9.	0.6	92
5	Selective production of Auger electrons from fast projectile ions studied by zero-degree Auger spectroscopy. Journal of Physics B: Atomic and Molecular Physics, 1983, 16, 3965-3971.	1.6	83
6	The unitary convolution approximation for heavy ions. Nuclear Instruments & Methods in Physics Research B, 2002, 195, 55-63.	0.6	74
7	Selective production of Li-, Be-, and B-likeKvacancy states in fast Ne projectiles studied by zero-degree Auger spectroscopy. Physical Review A, 1985, 31, 684-691.	1.0	72
8	Influence of nuclear track potentials in insulators on the emission of target Auger electrons. Physical Review Letters, 1992, 69, 628-631.	2.9	72
9	Two-center electron emission in collisions of fast, highly charged ions with He: Experiment and theory. Physical Review A, 1995, 52, 3796-3802.	1.0	69
10	Nonperturbative stopping-power calculation for bare and neutral hydrogen incident on He. Physical Review A, 1993, 47, 1119-1122.	1.0	66
11	Comprehensive analysis of the stopping power of antiprotons and negative muons in He and gas targets. Journal of Physics B: Atomic, Molecular and Optical Physics, 1996, 29, 307-321.	0.6	65
12	Energy dissipation of fast heavy ions in matter. Nuclear Instruments & Methods in Physics Research B, 2001, 175-177, 1-11.	0.6	61
13	Convolution approximation for the energy loss, ionization probability and straggling of fast ions. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 859-865.	0.6	60
14	Impact-parameter dependence of electronic energy loss and straggling of incident bare ions on H and He atoms by using the coupled-channel method. Physical Review A, 1991, 44, 2984-2992.	1.0	58
15	Impact-parameter dependent energy loss of screened ions. Nuclear Instruments & Methods in Physics Research B, 2000, 164-165, 203-211.	0.6	57
16	Electronic stopping of protons at intermediate velocities. Nuclear Instruments & Methods in Physics Research B, 1992, 69, 10-17.	0.6	49
17	Indications of Nuclear-Track-Guided Electrons Induced by Fast Heavy Ions in Insulators. Physical Review Letters, 1997, 79, 1821-1824.	2.9	48
18	Introducing electron capture into the unitary-convolution-approximation energy-loss theory at low velocities. Physical Review A, 2011, 84, .	1.0	47

#	Article	IF	Citations
19	Dynamic target screening for two-active-electron classical-trajectory Monte Carlo calculations forH++He collisions. Physical Review A, 1989, 40, 6223-6230.	1.0	46
20	Electron ejection from solids induced by fast highly-charged ions. Nuclear Instruments & Methods in Physics Research B, 1996, 107, 113-127.	0.6	46
21	Energy loss of argon in a laser-generated carbon plasma. Physical Review E, 2010, 81, 026401.	0.8	40
22	Femtosecond dynamics â€“ snapshots of the early ion-track evolution. Nuclear Instruments & Methods in Physics Research B, 2004, 225, 4-26.	0.6	39
23	An analytical energy-loss line shape for high depth resolution in ion-beam analysis. Nuclear Instruments & Methods in Physics Research B, 2007, 256, 92-96.	0.6	38
24	Angular dependence of energy loss in proton-helium collisions. Physical Review Letters, 1994, 72, 2159-2162.	2.9	36
25	Determination of the electron temperature in the thermal spike of amorphous carbon. Europhysics Letters, 1999, 47, 384-390.	0.7	36
26	Investigation of Î´-electron emission in collisions of highly charged fast Ne projectiles with carbon-foil targets. Physical Review B, 1990, 41, 6262-6271.	1.1	34
27	Doubly differential secondary-electron yields following 8-MeV/uU68+- and 3.5-MeV/uU38+-ion impact on a thin carbon-foil target. Physical Review A, 1993, 47, 3945-3950.	1.0	34
28	Giant Barkas Effect Observed for Light Ions Channeling in Si. Physical Review Letters, 2001, 86, 1482-1485.	2.9	34
29	Femtosecond dynamics â€“ snapshots of the early ion-track evolution. Nuclear Instruments & Methods in Physics Research B, 2004, 225, 4-26.	0.6	34
30	Angular dependence of the electronic energy loss of 800-keV He ionsalong the Siã€ˆ100ã€‰ direction. Physical Review B, 1997, 55, 4332-4342.	1.1	33
31	Auger electrons from ion tracks. Nuclear Instruments & Methods in Physics Research B, 2000, 164-165, 353-364.	0.6	33
32	Direct Evidence for Projectile Charge-State Dependent Crater Formation Due to Fast Ions. Physical Review Letters, 2008, 101, 167601.	2.9	32
33	Formation of Rydberg states in fast ions penetrating thin carbon-foil and gas targets. Physical Review Letters, 1987, 59, 1561-1564.	2.9	31
34	Strong continuum-continuum couplings in the direct ionization of Ar and He atoms by 6-MeV/uU38+andTh38+projectiles. Physical Review A, 1989, 40, 2971-2975.	1.0	31
35	Nonperturbative treatment of the screened-Coulomb contribution of projectile-electron loss. Physical Review A, 1996, 54, 2983-2990.	1.0	31
36	Cross sections for K-shell ionization of Si and Ar by 4 keV to 10 keV electron impact. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 107, 83-86.	0.9	30

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37	Shape of the electron capture to the continuum cusps for H,H2, and He targets in the velocity range 6.3â€“18.0 a.u.. Physical Review A, 1985, 31, 1392-1398.	1.0	30
38	An experimental determination of electron temperatures in the center of nuclear tracks in amorphous carbon. Nuclear Instruments & Methods in Physics Research B, 1998, 146, 131-136.	0.6	27
39	Limitations to depth resolution in ion scattering experiments. Nuclear Instruments & Methods in Physics Research B, 2001, 183, 16-24.	0.6	26
40	Ionization and Energy Loss Beyond Perturbation Theory. Advances in Quantum Chemistry, 2004, 45, 7-46.	0.4	26
41	Energy loss of slow ions: one-band calculation for alkaline metals. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 163, 439-446.	0.9	25
42	High ionization probabilities in 30-, 100-, and 300-keV proton-helium collisions. Physical Review A, 1988, 37, 370-376.	1.0	24
43	Determination of differential cross sections in classical trajectory Monte Carlo calculations. Journal of Physics B: Atomic and Molecular Physics, 1987, 20, 5463-5474.	1.6	23
44	Stopping of protons â€“ Improved accuracy of the UCA model. Nuclear Instruments & Methods in Physics Research B, 2012, 273, 1-5.	0.6	23
45	High Rydberg and Auger states in fast ion-atom collisions: Zero-degree observations. Nuclear Instruments & Methods in Physics Research B, 1987, 24-25, 173-179.	0.6	22
46	Cascade-induced asymmetry in Auger-electron emission following fast ion-solid interactions. Physical Review Letters, 1988, 61, 2677-2680.	2.9	22
47	On classical calculations of the electronic stopping power at intermediate energies. Journal of Physics B: Atomic, Molecular and Optical Physics, 1995, 28, 425-433.	0.6	22
48	Coupled-channel calculations of the electronic energy loss. Nuclear Instruments & Methods in Physics Research B, 1997, 132, 264-275.	0.6	22
49	Solid-state effects in d+d fusion reactions. Nuclear Instruments & Methods in Physics Research B, 2002, 193, 183-187.	0.6	22
50	Electronic stopping based on atomic and solid-state wavefunctions. Radiation Effects and Defects in Solids, 1994, null, 137-156.	0.4	21
51	Random and channeling stopping powers of He and Li ions in Si. Physical Review B, 2002, 65, .	1.1	21
52	Effects of external electric fields on high Rydberg states formed in foil and gas interactions of 85-MeVNe6+ions. Physical Review A, 1986, 34, 169-175.	1.0	20
53	Evidence for electron correlation in the two-electron continuum during double ionization in 300-keVH++He collisions. Physical Review Letters, 1990, 65, 3265-3268.	2.9	20
54	Resonant interatomic Coulombic decay in HeNe: Electron angular emission distributions. Physical Review A, 2018, 97, .	1.0	20

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55	Ion tracks â€" quasi one-dimensional nano-structures. Applied Surface Science, 2001, 182, 286-292.	3.1	19
56	Self-consistent field classical-trajectory Monte Carlo calculations of doubly differential cross sections for bare ions incident on helium. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, 2555-2565.	0.6	16
57	Population of projectile-ion states during the passage of high energy ne-ions through thin carbon foils. Radiation Effects and Defects in Solids, 1990, 112, 195-200.	0.4	16
58	Time-ordering effects inK-shell excitation of 170-MeVNe7+colliding with gas atoms: Single excitation. Physical Review A, 1993, 48, 2986-2994.	1.0	16
59	Improved calculations of the electronic energy loss under channeling conditions. Nuclear Instruments & Methods in Physics Research B, 1998, 136-138, 125-131.	0.6	16
60	Si-Auger electrons from the center of nuclear tracks. Nuclear Instruments & Methods in Physics Research B, 2002, 193, 705-712.	0.6	16
61	Advanced ion energy loss models: Applications to subnanometric resolution elemental depth profiling. Surface Science, 2007, 601, 5559-5570.	0.8	16
62	Asymmetric line shapes for medium energy H and He ions undergoing a large-angle collision. Physical Review B, 2008, 78, .	1.1	16
63	Electron Localization in Dissociating<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">H</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow><mml:mn Retroaction of a Photoelectron onto Its Source. Physical Review Letters, 2016, 116, 043001.	2.9	16
64	Single and double ionization in 300-keVH++He collisions at small impact parameters. Physical Review A, 1992, 46, 5687-5695.	1.0	14
65	Ion beam modification of PMMA â€" changes of the optical properties. Radiation Effects and Defects in Solids, 1996, 140, 63-74.	0.4	14
66	Coulomb heating of channeledH2+andH3+molecules in Si. Physical Review B, 2004, 69, .	1.1	14
67	Direct Observation and Theory of Trajectory-Dependent Electronic Energy Losses in Medium-Energy Ion Scattering. Physical Review Letters, 2009, 102, 096103.	2.9	14
68	Investigation of the impact-parameter dependence of electrons emitted in 30-, 100-, 350-keVH+and 100-keV3He2++Ar collisions. Physical Review A, 1987, 35, 598-606.	1.0	13
69	On the treatment of light-ion electronic stopping in dense matter. Nuclear Instruments & Methods in Physics Research B, 1994, 90, 10-19.	0.6	13
70	Nonperturbative treatment of medium-energy proton scattering under shadowing-blocking conditions in Al(110). Physical Review B, 2004, 69, .	1.1	13
71	Non-equilibrium emission of secondary ions from BeO films sputtered by swift gold ions. Nuclear Instruments & Methods in Physics Research B, 2004, 225, 72-77.	0.6	13
72	Investigation of simultaneous inner- and outer-shell ionization and Auger-electron emission in slowAr++Ar collisions at intermediate impact parameters. Physical Review A, 1988, 38, 5552-5562.	1.0	12

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73	Particle emission induced by the interaction of highly charged slow Xe-ions with a SiO₂surface. Radiation Effects and Defects in Solids, 1993, 127, 11-14.	0.4	12
74	Time-ordering effects inK-shell excitation of 170-MeVNe7+colliding with gas atoms: Double excitation. Physical Review A, 1995, 51, 350-358.	1.0	12
75	Electronic energy-density effects in ion tracks of metals. Nuclear Instruments & Methods in Physics Research B, 2005, 230, 426-430.	0.6	12
76	The retarding Besselâ€“Boxâ€”An electron-spectrometer designed for pump/probe experiments. Journal of Electron Spectroscopy and Related Phenomena, 2015, 203, 51-59.	0.8	12
77	Ground- and excited-state scattering potentials for the stopping of protons in an electron gas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 185201.	0.6	12
78	Frustrated Coulomb explosion of small helium clusters. Physical Review A, 2018, 98, .	1.0	12
79	Evidence for electron correlation during double capture in fast (vâ¼10a.u.) collisions. Physical Review A, 1989, 39, 1571-1574.	1.0	11
80	Energy loss in medium-energy ion scattering: A combined theoretical and experimental study of the model system Y on Si(111). Physical Review B, 2005, 72, .	1.1	11
81	Evidence for an Ultrafast Breakdown of the BeO Band Structure Due to Swift Argon and Xenon Ions. Physical Review Letters, 2010, 105, 187603.	2.9	11
82	Interatomic-Coulombic-decay-induced recapture of photoelectrons in helium dimers. Physical Review A, 2014, 90, .	1.0	11
83	Thermal evolution of the band edges of 6H-SiC: X-ray methods compared to the optical band gap. Journal of Electron Spectroscopy and Related Phenomena, 2014, 197, 37-42.	0.8	11
84	Stopping power of cluster ions in a free-electron gas from partial-wave analysis. Physical Review A, 2018, 98, .	1.0	11
85	UE112_PGM-1: An open-port low-energy beamline at the BESSY II undulator UE112. Journal of Large-scale Research Facilities JLSRF, 0, 1, A33.	0.0	11
86	Electron Capture to the Continuum at Asymptotically High Velocities. IEEE Transactions on Nuclear Science, 1983, 30, 902-905.	1.2	10
87	High-resolution ArL-shell Auger spectroscopy in 80-MeVAr5++He collisions. Physical Review A, 1989, 40, 5633-5640.	1.0	10
88	Dominant two-center electron-electron interactions in collisions of 120-MeVNe6+ions with gas targets. Physical Review A, 1995, 52, 387-391.	1.0	10
89	Search for short-time phase effects in the electronic damage evolution â€“ A case study with silicon. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 1287-1293.	0.6	10
90	Electronic energy loss of channeled ions: The giant Barkas effect. Physical Review A, 2004, 70, .	1.0	9

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91	Analytical energy loss distribution for accurate high resolution depth profiling using medium energy ion scattering. Applied Physics Letters, 2008, 92, 164102.	1.5	9
92	Measurement of negative-ion and -cluster sputtering with highly-charged heavy ions. Nuclear Instruments & Methods in Physics Research B, 1995, 100, 47-54.	0.6	8
93	Î´-electron spectroscopy of transfer and ionization in protonâ€“rare-gas-atom collisions. Physical Review A, 1987, 35, 485-488.	1.0	7
94	Origin of cusp electrons in slow (vâˆ¼0.4 a.u.)O6++He collisions. Physical Review A, 1990, 42, 5776-5779.	1.0	7
95	Stopping mechanisms of negative heavy particles in gas targets. Nuclear Instruments & Methods in Physics Research B, 1996, 115, 106-110.	0.6	7
96	Characterization of aged latent ion tracks in polyimide. Nuclear Instruments & Methods in Physics Research B, 1996, 116, 66-71.	0.6	7
97	Bunch-resolved diagnostics for a future electron-storage ring. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 990, 164992.	0.7	7
98	Laser-pump/X-ray-probe experiments with electronsÂejected from a Cu(111) target: space-charge acceleration. Journal of Synchrotron Radiation, 2016, 23, 1158-1170.	1.0	7
99	Double Ionization of Helium by 40 MeV Protons. Europhysics Letters, 1994, 27, 341-346.	0.7	6
100	Evidence for convoy-electron shifts due to induced potentials. Nuclear Instruments & Methods in Physics Research B, 1996, 115, 215-219.	0.6	6
101	Channeling energy loss of O ions in Si: The Barkas effect. Nuclear Instruments & Methods in Physics Research B, 2002, 193, 172-177.	0.6	6
102	Inelastic energy loss in100âˆ'keVH+scattering from single atoms: Theory and experiment for K, Rb, and Cs. Physical Review B, 2006, 74, .	1.1	6
103	Ultrafast electronic processes in an insulator: The Be and O sites in BeO. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 48-55.	0.6	6
104	Ionization and autoionization in small impact parameter H + + He and in high energy Ne10+ + He collisions. Nuclear Instruments & Methods in Physics Research B, 1989, 40-41, 178-183.	0.6	5
105	High-resolution Auger spectroscopy of Na-like argon and sulfur ions singly excited in high-energy collisions with light target atms. Physical Review A, 1991, 44, 2900-2912.	1.0	5
106	Spectroscopy of Si-Auger electrons from the center of heavy-ion tracks. Nuclear Instruments & Methods in Physics Research B, 2003, 209, 26-31.	0.6	5
107	The influence of the Coulomb explosion on the energy loss of <mml:math altimg="si5.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/...	0.6	5
108	Interplay between the Coulomb explosion and vicinage effects studied usingH2+molecules under channeling conditions. Physical Review B, 2006, 73, .	1.1	5

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109	Indications for Enhanced Auger-Electron Absorption in a Hot-Electron Gas. Physical Review Letters, 2007, 99, 197602.	2.9	5
110	The angular- and crystal-momentum transfer through electronâ€“phonon coupling in silicon and silicon-carbide: similarities and differences. New Journal of Physics, 2014, 16, 093056.	1.2	5
111	Generation of intense and coherent sub-femtosecond X-ray pulses in electron storage rings. Scientific Reports, 2020, 10, 10093.	1.6	5
112	High-energy ion beam irradiation of Co/NiFe/Co/Cu multilayers: Effects on the structural, transport and magnetic properties. Thin Solid Films, 2008, 516, 2087-2093.	0.8	4
113	Born in weak fields: below-threshold photoelectron dynamics. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 034002.	0.6	4
114	Dynamics of space-charge acceleration of X-ray generated electrons emitted from a metal surface. Journal of Electron Spectroscopy and Related Phenomena, 2017, 220, 40-45.	0.8	4
115	Electron Ejection Induced by Fast Projectiles. NATO ASI Series Series B: Physics, 1993, , 197-214.	0.2	4
116	Evidence for enhanced desorption of hydrogen atoms from a Si(100) surface induced by slow highly-charged ions. Nuclear Instruments & Methods in Physics Research B, 2006, 248, 253-258.	0.6	3
117	Impact-parameter dependence of the energy loss of fast molecular clusters in hydrogen. Physical Review A, 2008, 77, .	1.0	3
118	Development of the Electron-Beam Diagnostics for the Future BESSY-VSR Storage Ring. Journal of Physics: Conference Series, 2018, 1067, 072005.	0.3	3
119	Two-center electron-electron interactions in collisions of fast Ne7+ and Ne6+ ions with gas atoms. Nuclear Instruments & Methods in Physics Research B, 1995, 98, 262-265.	0.6	2
120	Impact-parameter dependence of the electronic energy loss of fast cluster projectiles. Nuclear Instruments & Methods in Physics Research B, 2005, 230, 17-23.	0.6	2
121	Observation of collective inner-shell effects for protons backscattered from the Al(110) surface. Physical Review A, 2005, 72, .	1.0	2
122	Skimming-trajectory effect for energy loss of medium-energy He ions passing along major crystal axes of KI(001) and RbI(001). Physical Review A, 2013, 87, .	1.0	2
123	Indications for a new electron-ejection mechanism: Nuclear-track guided electrons induced by fast heavy ions in insulators. Nuclear Instruments & Methods in Physics Research B, 1998, 135, 466-470.	0.6	1
124	The role of basic energy-loss processes in layer-resolved surface investigations with ions. Current Applied Physics, 2003, 3, 35-37.	1.1	1
125	Ultrafast band-structure variations induced by fast Au ions in BeO. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 959-963.	0.6	1
126	Multiply differential ionization probabilities in small impact parameter ion-atom collisions. AIP Conference Proceedings, 1990, , .	0.3	0

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127	The excitation of sodium-like argon ions by high energy projectiles. Nuclear Instruments & Methods in Physics Research B, 1991, 56-57, 116-120.	0.6	0
128	Impact-parameter dependence of the electronic energy loss. AIP Conference Proceedings, 2000, , .	0.3	0
129	Fast Processes in Ion Tracks. AIP Conference Proceedings, 2004, , .	0.3	0
130	Al-K-Auger energy spectra: Probing the electron dynamics in ion-solid interactions. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 192-200.	0.1	0
131	Correlation between X-ray yield and electron spectra in laser-cluster interaction. Journal of Physics: Conference Series, 2012, 388, 032081.	0.3	0
132	INNER-SHELL COLLECTIVE EFFECTS FOR PROTONS BACKSCATTERED FROM THE AL(110) SURFACE. , 2006, , .		0
133	Accurate Quantum Mechanical Calculation of Stopping Powers for Intermediate Energy Light Ions Penetrating Atomic H and He Targets. NATO ASI Series Series B: Physics, 1991, , 517-528.	0.2	0
134	Beam halo measurements for special bunches in a storage ring by using a coronagraph. Review of Scientific Instruments, 2021, 92, 123302.	0.6	0